

# Effects of Contextualization on the Reading Comprehension Performance of Filipino Learners

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## ABSTRACT

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*Contextualizing reading comprehension instruction places the learners in a vivid and meaningful authentic situation. Contextualization can be done through designing the reading lessons and activities that center on the learners' field of interests and environment. The present study attempts to determine the effects of Contextualized Teaching and Learning on reading comprehension performance of the learners. There were thirty-three (33) Bachelor of Science in Information Technology learners who participated in this quasi-experimental study. A researcher-made reading comprehension test was used to measure the learners' reading comprehension performance. Results revealed that the reading comprehension performance of the learners during pretest is within the average ( $M=9.12$ ,  $SD=2.56$ ), and the posttest result is above average rating ( $M=12.91$ ,  $SD=2.38$ ). Furthermore, there was a significant increase of the reading comprehension performance of the students from pretest to posttest. Hence, contextualizing the reading tasks of the learners has positive effects on their comprehension performance. Contextualized teaching and learning is recommended in helping learners improve their performance in reading.*

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## Introduction

Contextualized Teaching and Learning (CTL) is known to have a great impact to the students' academic performance. It promotes positive learners' engagement and improves learning skills among learners. Berns and Ericson (cited in Center for Student, Research and Planning Group, &

Academic Senate for California, 2009) defines contextualization as the notion in teaching and learning which relates the lesson or the content of a subject matter into a real world setting. Mazzeo, Rab, and Alssid (2003) described contextualization as instructional strategies developed to smoothly connect the learning of basic skills to career-related content through teaching and learning solely on real applications in a particular

context. Moghaddas (2013) explained that contextualization is a profound learning which occurs by connecting the thoughts and principles within and across disciplines. This means that in teaching, the teacher must place the target skill in authentic situation to make the process of learning significant to the learners. Context should not be taken for granted and should be considered when a teacher plans, designs, and develops instructional learning activities.

Improving students reading comprehension performance is a crucial task which most of the teachers and learners find difficult in dealing with. Likewise, students nowadays do not read a lot because of the presence of high technology gadgets which occupied their spare time. Books and print materials are sometimes set aside due to the influx of reading articles on the internet. In addition, learners today, seldom read articles which are not relevant to their needs and interest. This situation posed a problem to the reading teacher. Teacher will face difficulty during reading lessons if he does not know how to arouse the interest of the students. In capturing the students' interests in reading instruction, teachers must design a lesson which does not bore the students. To address this problem, teachers need to contextualize the reading lesson. Materials should be within the concern and within the context of the students to foster higher performance in reading comprehension.

Teaching reading to the first year college Bachelor of Science in Information Technology (BSIT) students is a difficult task. Most of the students' fields of interests are more related to computer hardware servicing and software innovation programming. The students' future career is basically on computer Information Technology (IT) related industry. Thus, there is a need to contextualize their instruction for them to be able to function well in their chosen field, which gives the teacher or the researcher the reason to employ contextualized teaching and learning in reading comprehension to capture students' motivation and to prepare

them for their future occupation.

## **Purpose of the Research**

The main purpose of the study was to find out the reading comprehension performance of the BSIT students before and after the instruction employing contextualization. Specifically, it answered the questions:

1. What is the reading comprehension performance level of the students in their pretest and posttest?
2. Is there a significant difference between the reading comprehension performance level of the students in pretest and posttest?

## **Conceptual and Theoretical Framework**

### *Theories on Contextualized Teaching and Learning*

Malcolm Knowles' theory of Andragogy also known as the adult learning theory (Pappas, 2013) explained that in the learning process, the students serve as an agent in the process of learning and that an adult learns differently from a child. Concept learners are presumed to be: self-directed, has a reservoir of different personal experiences, motivated to learn, life-centered, activity and problem focused, and stirred by internal factors. According to the Center for Student, the PRGroup, & Academic Senate for California (2009), a procedural scheme that uses life experiences is the basic layout in andragogical model. Mezirow (2000) explains "meaning system" that acts as strainers for information as learners tries to link novel information. He further elaborates the importance of the students to be analytically cognizant of their implicit assumptions and outlooks and evaluate their application for making an explanation. Basically, this concept elucidates the

significance of the experiences and maturity of the learners which is the principal core for the achievement and enthusiasm of the adult learners.

Another theory on Social Constructivism by Lev Vygotsky (Aljasan, 2011) states that the social milieu is responsible in the first conception of one's knowledge. Social constructivists said that, learning is a dynamic process, finding of principles, theories, and realities should be discovered by the learners themselves. Thus, the importance and promotion of critical learning in reading is encouraged. According to Curpoz and Salandan (2006), constructivists view learning as a dynamic practice that results from self-constructed meanings, a meaningful connection is established between prior knowledge and the present learning activity. They further elaborated that this is anchored on the belief that every learner constructs and reconstructs meanings depending on past experiences. They continue reflecting and evaluating accumulated knowledge with an end in view of constructing new meaning. Social Constructivism Theory relates to the teaching of reading comprehension, focusing on the experience and background knowledge of the students. To understand the text, readers must also rely on prior knowledge to fully grasp what the text is trying to say (Kukla, 2000).

### *Contextualized Learning*

According to Berns and Erickson (2005), contextual learning theory assumes that learning make sense if the learners can deal with novel data within their own frame of reference. Through this learning approach, the learner's mind will look for the meaning of the text within the context, that is the reader's mind will associate what is written in the page to his/her previous knowledge and experiences so that the text will emerge valuable (Contextual Learning, n.d). This must be the reason why contextualizing the reading lesson is required in developing reading comprehension skills, because

it provides a way to develop not only the content knowledge of the reader but also in improving career-related opportunities, since students will be reading an article based on their field of interest. (Berns & Erickson, 2005).

Contextual learning theory which states that learning happens when one is able link between the content of the text and the context. In other words, the lesson or the reading text must be related to the students' interest and are familiar to them. Since this study is for BSIT students, contextualized learning is needed because their course is used heavily in career and in technical education. Their instruction must be specific and students must relate the content to the world through many different avenues.

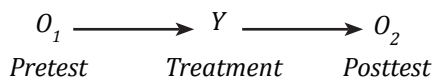
Resnick (1987) states that symbol manipulation and conceptualization were emphasized by the education department, instead of learning things which are useful outside the classroom or in the real world. She added that, decontextualizing the lesson makes the content of the lesson futile because it has no meaning for the students.

Moghaddas (2013) has cited different sources of the elements of contextualization. There sources involve interdisciplinary teaching and learning in which varieties of instructional content are put together to cater the needs of the students; the experiences of the learners outside from the school which acknowledges the significance of the students' out-of-the-school experiences inside the classroom; the cooperation and collaboration among teachers to determine authentic materials in teaching which applies teachers teamwork in distinguishing the real materials and activities to be included in the lesson; student-focused learning that deals with putting the students in the center of the educative process; use of clear learning strategies that emphasizes the simple instructional plans which suits student's level of interest ; and authentic assessment which tries to avoid the traditional paper-pencil evaluation.

## Methodology

This study used the quasi-experimental design (Calmorin and Calmorin, 2007) specifically it used the One-group Pretest-Posttest design (Creswell 2014).

### *Model of One-Group Pretest-Posttest Design*



### *(Contextualized Teaching Learning Approach)*

The symbol *O* refers to the observation on the measurement of the dependent variable which is the level of comprehension performance of the students. The symbol *Y* represents the exposure of the group to the treatment which is the Contextualized Teaching and Learning. The measurement of the dependent variable comes before and after the treatment *Y*, through the pretest and the post test.

### *Subjects*

The subjects of this study were the thirty-three (33) BSIT 1B freshman students of the West Visayas state University, Extension Campus at Himamaylan City. They were the students of the researcher in Eng 101 – Study and Thinking Skills Course in the first semester of the School Year 2012-2013.

### *Instrumentation*

A validated and a reliable researcher-made reading comprehension test was used to measure the reading comprehension performance of the students. This researcher-made instrument test underwent item analysis in which it was conducted to a group of IT students from other IT School in Negros Occidental. Discrimination Index and the Index of Difficulty were also computed. There were items that were retained, revised and rejected. Also, the instrument was evaluated by three experts in the field

of English Instruction. The reliability test was done through the use of Split-half Method using Kuder-Richardson Reliability Coefficients (KR20) Formula, the whole test yielded a reliability of 0.71 which means that the whole test is reliable. The reading comprehension test included the following: noting details, evaluating judgment, drawing conclusion, drawing inferences, getting the main idea and supporting details, recognizing fact from opinion, and getting information. This researcher-made test was composed of twenty - multiple choice items with four options. Revised course syllabus, validated reading comprehension lessons (See appendix A for a sample lesson) and power point presentation were also used during the experiment.

### *Data Collection*

In the first session, the students took the pretest of the reading comprehension test online using the personal Google Form. The data were collected and analyzed. On the next two sessions, the researcher extensively oriented the students on reading comprehension class. The orientation was done with the aid of a Power Point presentation. Then, the succeeding 20 session were devoted solely to the experiment. Discussions on the strategies on how to develop the students' reading comprehension skills were thoroughly delivered. The content of the reading materials and activities were mostly IT related and interdisciplinary. Reading assignments were done through letting the students search the article in the internet using their laptops or by going to the internet café. When the students were in the sessions, they were given tasks to accomplish the activities that foster the development of the reading skills with the aid of a power point presentation and sometimes in a print copy. Students were also told to practice reading comprehension by taking a reading comprehension test online. They were requested to submit a print-screen of their reading comprehension results. After this

experiment, the students were asked again to answer the reading comprehension test. Data were gathered and were analyzed.

### Data Analysis

The statistical tool used in the interpretation of data includes mean and paired t-test. Mean was used to determine the reading comprehension level of the students while paired t-test was used to know if there is a significant difference between the pretest and posttest reading comprehension level of the students. The level of significance ( $\alpha$ ) was set to 0.05 level of confidence.

## Results and Discussion

This part discusses the results and findings of the study.

**Table 1.**

*The reading comprehension level of BSIT freshman students before and after the experiment*

Category	Mean	SD
CTL		
Pretest	9.12	2.65
Posttest	12.91	2.38

Scale Range	Interpretation
16.21 - 20	Outstanding
12.41 - 16.2	Above Average
8.61 - 12.4	Average
4.48 - 8.6	Below Average
1.00 - 4.8	Needs Improvement

Table 1 shows the pretest and posttest results on the reading comprehension level of the students. Results revealed that the reading comprehension level of the students in pretest is average ( $M=9.12$ ,  $SD=2.65$ ) while in the posttest, the students' reading comprehension level is above average ( $M = 12.91$ ,  $SD = 2.28$ ).

**Table 2**

*t-test results on the differences of the students' pretest and posttest reading comprehension performance*

Compared groups	DF	Mean	SD	t-ratio	t-Prob.
CTL					
Pretest	32	9.12	2.65	7.958	.000
Posttest		12.91	2.38		

*P<.05 Significant at .05 alpha*

Table 2 shows the difference between students' pretest and posttest reading comprehension performance. The t-test computations reveal significant differences on the students' pretest and posttest reading comprehension performance,  $t(32)=7.958$ ,  $p=.000$ . Further, there is a mean difference of 3.79 on the reading comprehension performance of the students pretest to posttest. It can be inferred therefore, that contextualizing the reading lesson of BSIT students can really increase their reading performance. This result shows that contextualization has a positive effect to the reading performance of the students.

The aforementioned results are supported by the study conducted by Kuncoro (2008) on improving reading competence using contextualized teaching and learning of Grade 8 students. Kuncoro showed that the use of Contextualized teaching and learning in increasing reading comprehension has a significant influence on the improvement of reading competence of the students. Moreover, according to Berns and Erickson (2005) contextualized learning approach to teaching provides ways for improving career-related and educational proficiencies in a greater level which supported the study of Moghaddas (2013) on the effect of contextualization on the Iranian EFL learners' performance in reading tasks, his findings show that learners taught in contextualization framework gained better result. It shows that putting the lesson within the interest of the students would mean increase of academic performance. Resnik (n.d.), the leading theorist of contextualized education, states that the

need to provide a learning environment that will help the students' use their full potential is important because according to him students can function well if they are at ease with the place where they belong.

Similarly, this study maintains the findings about contextualizing the instruction and its impact on the reading comprehension of the students. Berns & Erickson (2005) found that those educators who incorporated more genuine literacy activities, more often had learners who displayed greater development both in comprehension and writing. The effective use of contextualized learning in the teaching of reading comprehension is also supported by Kunco's study. He found out that using this approach can really help students improve their reading competence. The results also support the contextualized learning theory because, students were able to increase their comprehension level when the texts presented to them have connections to their lives and to their own structure of orientation.

## Conclusion and Recommendations

Most of the educators agreed that a teacher must have a reservoir of teaching methods and techniques to help the students improve their academic performance. Educators explained further that a one-size-fits-all approach is not recommended in the teaching of language especially in reading comprehension. However, practitioners in the academe have encouraged teachers and instructors alike to look for approaches, techniques and strategies which will help students develop their academic competence. Thus the study reveals a good point that using contextualized teaching and learning in improving the learners' reading comprehension performance has a significant effect. Also, it can be concluded that the use of contextualization in the classroom once again had proven the theory of adult learning. This theory postulates that the students are motivated to learn, able

to use their schema in understanding the text, connect the text and context, and, can boost students' confidence because reading instructions are within their framework. However, results may not be very conclusive since this study was employed to only one group of subjects. There might be other significant variables which influences the result of the posttest.

Based on the results of the study, the following recommendations are established.

First, it is recommended that the Contextualization of Reading instruction may be used in developing the reading comprehension performance of the BSIT students. Second, contextualized teaching and learning approach may be an alternative approach in the teaching of reading comprehension in Eng 101 course not only in the BSIT students but also to other courses. Lastly, replication of this study is highly recommended using two groups of subjects to prove the veracity of the claims in this paper. Studies like the correlation of fluency rate and reading comprehension level using Contextualized Teaching and Learning in reading lessons and variables such age, gender, IQ, motivation, level of learning, learner's self-awareness, and attitudes towards reading must also be explored in the study.

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## APPENDIX A

### Sample Lesson for Contextualization in Reading Comprehension

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#### I. Objectives:

At the end of the lesson the students will be able to:

- a. define unfamiliar vocabulary found in the selection;
- b. use the vocabulary in a sentence;
- c. draw inference from the selection read; and
- d. cite facts that supports their conclusion.

#### II. Subject Matter:

**Topic:** *“Drawing of Inference” and “Russia computer experts who detected Flame malware issue warning”*

**Materials:** *Projector, and Laptop*

**Concept:** *An inference is an idea/thoughts or a deduction that is taken from the evidence and reasoning. It is considered as an educated guess. By personal experiences, one may learn some things. However one gains other knowledge by inferencing – the method of inferring things created on what is already know.*

#### III. Learning Activity

##### PRE READING ACTIVITIES

##### A. Motivation

- Present computer related objects before the class. Group the students and have them share ideas about the person/s who might own the objects. Have a representative from the group to report their output.

#### B. Presentation and Lesson Proper

- Have the students analyze their output and have them list down the clues and phrases which helps them derive their inferences.
- Guide the students to arrive the following:
  - i. Why do you think \_\_\_\_\_?
  - ii. How did you know \_\_\_\_\_?
  - iii. What probably caused \_\_\_\_\_?
  - iv. Can you infer \_\_\_\_\_?
  - v. What clues led you to believe \_\_\_\_\_?
  - vi. How might \_\_\_\_\_ feel \_\_\_\_\_?
  - vii. I predict \_\_\_\_\_.
  - viii. I think that \_\_\_\_\_.
  - ix. My guess is \_\_\_\_\_.
- Tell the students about the objectives of the day.
- Have the students work vocabulary development

##### Vocabulary

Directions: Encircle the letter of the correct meaning of the italicized word.

1. IT experts claim that cyber *espionage* is like stealing something from an individual.

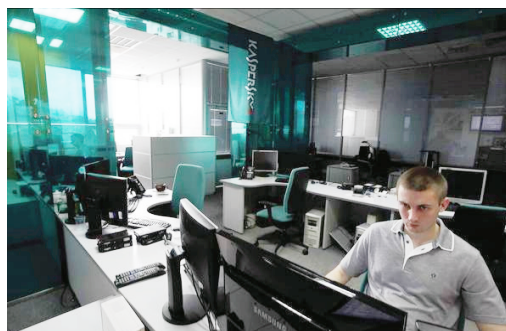


- a. The practice of obtaining secrets without the permission of the holder of the information from individuals using internet.
  - b. The action of giving your secrets to others.
  - c. The act of obtaining permit from the government using computer.
  - d. The right to procure an item from a computer.
2. Some of us are called not by our real name by our **moniker** at home.
- a. Middle name
  - b. Family name
  - c. Nickname
  - d. Real name
3. The next century is said to be the cyber **warfare** (a political motivated hacking to conduct sabotage and espionage) age.
- a. actions by a nation-state to penetrate another nation's computers or networks for the purposes of causing damage or disruption.
  - b. war among nations though computers/internet
  - c. Penetrating other computer through the use of cyber program.
  - d. Act of send virus to others.
4. A **sophisticated** computer network was developed in a most advanced way.
- a. complex and very up-to-date
  - b. beautiful and tempting
  - c. powerful and dangerous
  - d. threatening and extreme

## SETTING THE PURPOSE FOR READING

### Activity 1

1. Make some guesses about the selection based on its title "**Russia computer experts who detected Flame malware issue warning**"
2. Observe the picture and say something about it.



*Computer experts at Kaspersky Lab in Moscow, which detected the sophisticated Flame malware, issue warnings about cyber war. (Sergei L. Loiko / Los Angeles Times / May 30, 2012)*

### **Russia computer experts who detected Flame malware issue warning**

*The sophisticated program is a powerful weapon for cyber espionage, Kaspersky Lab experts say. Others warn that cyberspace has become the new battleground.*

By, Sergei L. Loiko, Los Angeles Times  
May 31, 2012, 5:00 a.m.

MOSCOW — Computer virus experts at Kaspersky Lab, acting with the blessing of the United Nations, were searching for a villain dubbed the Wiper when they came across a much more menacing suspect requiring a new moniker: Flame.

The malicious program left experts all but certain that a government sponsor intent on cyber warfare and intelligence gathering

was behind some suspicious activity, in part because of the likely cost of such a sophisticated endeavor.

“We entered a dark room in search of something and came out with something else in our hands, something different, something huge and sinister,” Vitaly Kamlyuk, a senior antivirus expert at Kaspersky Lab, said in an interview Wednesday.

Kamlyuk said Flame can copy and steal data and audio files, turn on a computer microphone and record all the sounds in its vicinity, take screen shots, read documents and emails, and capture passwords and logins.

The program can communicate with other computers in its radius via the infected computer’s Bluetooth capability and locate their whereabouts even without an Internet connection, he said.

“We haven’t figured out yet whether it can carry out some destructive actions but we can say with confidence that it is a powerful universal set of tools for cyber espionage,” Kamlyuk said.

“Many people still think that cyber warfare is a myth and a fantasy but as we reassemble and study one by one the numerous components and modules of this unique program we see that it is a real weapon of this undeclared war that is already going on.”

Experts worldwide have been surprised and impressed by the emergence of Flame, which Kaspersky Lab detected after being asked several weeks ago by the United Nations’ International Telecommunication Union to check reports of suspicious computer activity. It is believed that a wide variety of computers belonging to individuals and state-related organizations were targeted in the Middle East and North Africa, including Iran, Syria, Lebanon and Sudan.

Kaspersky Lab has uncovered damage to at least 189 computers in Iran, 98 in Israel and the Palestinian territories, 32 in Sudan, 30 in Syria, 18 in Lebanon, 10 in Saudi Arabia and five in Egypt. Many more computers may have been infected by Flame, Kamlyuk said.

Experts are still studying the software program and trying to determine the point of entry.

A previous worm-like malware known as Stuxnet targeted computers in Iran controlling centrifuges at nuclear facilities and was believed to be an effort by Israel, the United States or both.

“Stuxnet’s goal was to identify infrastructural ties with industrial systems of Iran and cause material damage,” Kamlyuk said. “The malware could reprogram the control of [uranium enrichment] centrifuges, command the speed of the engine, keep it to the maximum without rest and eventually destroy the equipment.”

Kaspersky then found a way to oppose that threat and protect its clients but stopped short of identifying the culprit.

Analyzing Flame, which is considered a far more powerful weapon than Stuxnet, may take many months, but Kaspersky experts have little doubt that it is a government-backed program carried out in secrecy.

“Cyber weapons like Stuxnet and Flame can be potentially considered serious threats to national security,” Kamlyuk said. “Humankind has entered a new era, the era of cyber war, but we don’t want to paint scary scenarios and provide potential clues for current and future perpetrators of such attacks.”

Despite the accomplishments of a private company such as Kaspersky Lab, some analysts in Russia said the country remains unprepared for cyber war.

“It is a natural process that all these new breakthrough technologies immediately attract military and intelligence agencies,” Leonid Ivashov, vice president of the Academy on Geopolitical Affairs, a Moscow-based think tank, said in an interview.

“And it would be rash and stupid to hope that those who still think of world supremacy will not try to take advantage of these new technologies, which can help them conquer the world without bombs and missiles.”

Russia does not have adequate industry, research centers, institutes or expertise to meet the challenges of modern cyber technology, said Ivashov, a former chief of the Russian Defense Ministry’s international military cooperation directorate.

Gennady Gudkov, deputy chairman of the security committee of the State Duma, the parliament’s lower house, said the country’s computer technology, largely dependent on foreign-made software and hardware, leaves it “extremely vulnerable and virtually defenseless in conditions of cyber warfare.”

*(Source: Sergei L. Loiko (2012), Los Angeles Times. Retrieved June 5, 2012 from <http://www.latimes.com/news/nationworld/world/la-fg-russia-flame-cyberwar-20120531,0,4986511.story>)*

## POST READING ACTIVITIES

### Comprehension Questions

Answer the following questions

1. What is “Flame” and how does it differ from Stuxnet?
2. What does this line mean? “We entered a dark room in search of something and came out with something else in our hands,

something different, something huge and sinister”.

3. Give the subject of the selection.
4. Why are nations afraid of malware? And what is its effect to us?
5. What is the significance of this information to us?

For each of these statement, write Y (yes) if the conclusion is an accurate one, N (no) if the information is inaccurate one, and CT (can’t tell) if you do not have enough information to make an inference (conclusion).

1. \_\_\_ Malwares are software that deactivates all computer programs.
2. \_\_\_ Cyber espionage is about to happen in the whole world.
3. \_\_\_ There was no stronger software other than “Flame”.
4. \_\_\_ Cyber age is making the human more IT dependent.
5. \_\_\_ America and Russia do not have the determination over world supremacy.
6. \_\_\_ Militaries nowadays use computer gadgets to distinguish their foes.
7. \_\_\_ Computer programs are extortions to state safekeeping.

8. \_\_\_\_ IT experts are still working on more advance software to the development of humankind existence.
9. \_\_\_\_ The world is fully equipped technology in preparation for cyber war.
10. \_\_\_\_ The development of malware is a government sponsored activity.

3. Based on the answers to the above questions, what conclusion can you draw from the selection?

Group the students and have them use the graphic organizer below to come up with their inferencing. Have the students present their output using PowerPoint presentation.

## Activity 2

Read the following article, then answer the questions that follow.

Paul Kennedy, a well-known futurist, foresees the challenges facing the 21st century to be driven by “the interaction of overpopulation, pressure upon the land, migration and social instability on the one hand and technology’s power both to increase productivity and to displace traditional occupation in the other.

According to this scenario, population explosion will cause massive migration from poor regions where population pressure is heaviest to developed regions perceived to be offerings better economic opportunities. As a result, urban economic centers become more overcrowded, giving rise to social instability and crime as resources for social services are strained beyond capacity.

*(Source: Scanning the Global Environment p. 91. Megatrends: The Future of Filipino Children. Katha Publishing Co., Inc. 1998.)*

1. What are the challenges facing the 21<sup>st</sup> century?
2. What will be the effects of population explosion?

Inference <i>(So...)</i>	What I know <i>(My ideas/ thoughts)</i>	Clues from the article <i>(What the Article tells)</i>

*\*Rubrics is used for assessment of groups presentation and output*

### C. Generalization:

*How do we make inferences?*

*Guide the students to arrive with the following answers:*

### Strategic Actions for Inferring

*Readers:*

- Understand what is stated but is implied in the text (both print and illustrations)

- Make conclusions that are not stated but are based on information found in the text or illustrations
- Make judgments about characters, events, theme, and plot that have not been explicitly stated
- Think about the deeper meanings of text
- Recognize symbolism and use it to interpret the text
- Develop theories that explain characters' motives or events
- Develop empathy for characters
- Use background knowledge and information from the text to form theories about the significance of events

*Source: Teaching for Comprehending and Fluency, Fountas and Pinnell*

**D. Assignment:**

- Have the students practice inferencing skills by doing some online activities.

**Directions:** Browse the following link and take the test on inferencing skills. Screen shot your answer and submit it on the next meeting.

**Links:**

<https://www.quia.com/rr/332704.html>

<http://www.philtulga.com/Riddles.html>

<http://www.usingenglish.com/comprehension/>